<u>**AMENDMENTS TO THE CLAIMS**</u>

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

1.   (currently amended): ~~Method~~ A method for using the complete resource capacity

of a synchronous digital hierarchy network, subject to a protection mechanism, in the presence of

a data ~~(packet)~~ network, said network comprising nodes bidirectionally transmitting time

division multiplex (TDM) and ~~Data~~ data traffic over Working and Protection capacity/channels,

wherein ~~said method comprises the following steps,~~ in case of a failure at the affected nodes, said

method comprising:

cutting the working capacity ~~is cut~~;

subjecting the TDM traffic ~~is subject~~ to said protection mechanism, and ~~is shifted~~ shifting

the TDM traffic over the protection capacity;

shifting a part of high priority data traffic ~~is shifted~~ over the protection capacity; and

a part of low-priority data traffic, transported over the protection capacity in normal

conditions, ~~is caused to share~~ shares ~~the~~ a remaining protection capacity with ~~the~~ a low-priority

part of the data traffic, transported over the working capacity in normal conditions, ~~in such a way~~

~~as~~ wherein the complete protection capacity is used to carry data traffic in both normal and failure

conditions.

2.   (currently amended): ~~Method~~ The method according to claim 1, ~~wherein said~~

~~method comprises the further step of~~ further comprising reserving a part of the protection

capacity to carry ~~NUT (~~Not pre-emptive Unprotected Traffic~~)~~ (NUT) data traffic during ~~a~~ in ~~both~~

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normal condition and a failure conditionscondition.

3.   (currently amended): Method The method according to claim 1, wherein said sharing of the remaining protection capacity for carrying the low priority data traffic is made by applying a function of statistical multiplexing to said low priority data traffic coming from both the working capacity and the protection capacity, so aswherein in case of a failure there is not a service interruption, but only a service degradation and no service interruption.

4.   (currently amended): Method The method according to claim 2, wherein said sharing of the remaining protection capacity for carrying the low priority data traffic is made by applying a function of statistical multiplexing to said low priority data traffic coming from both the working capacity and the protection capacity, so aswherein in case of a failure there is not a service interruption, but only a service degradation and no service interruption.

5.   (currently amended): Method The method according to claim 1, wherein in said network nodes, an Actuator function is performed on the a connection matrix of the a cross-connect, whereby in case of a failure, the new matrix connections to the protection capacity are established in order to restore the failed working capacity, said Actuator function causing the performing of the following actions on said protection capacity, in case of a failure:

squelching partially the low priority traffic, present before the failure, and pre-empting only the a part of the low priority traffic necessary for carrying said TDM and said high priority data traffic;

Bridge and Switch: comprising acting on the cross-connection matrix to restore the TDM and high priority data traffic; and

balancing the access for the low priority data traffic to the remaining spare capacity by

said statistical multiplexing.

6.   (currently amended): ~~Method~~ The method according to claim 2, wherein in said

network nodes, an Actuator function is performed on ~~the~~ a connection matrix of ~~the~~ a cross-

connect, whereby in case of a failure, ~~the~~ new matrix connections to the protection capacity are

established in order to restore the failed working capacity, said Actuator function causing the

performing of the following actions on said protection capacity, in case of failure:

squelching partially the low priority traffic, present before the failure, and pre-empting

only ~~the~~ a part of the low priority traffic necessary for carrying said TDM and high priority data

traffic;

Bridge and Switch: comprising acting on the cross-connection matrix to restore the TDM

and high priority data traffic; and

balancing the access for the low priority data traffic to the remaining spare capacity by

said statistical multiplexing.

7.   (currently amended): ~~Method~~ The method according to claim 3, wherein in said

network nodes, an Actuator function is performed on ~~the~~ a connection matrix of ~~the~~ a cross-

connect, whereby in case of a failure, ~~the~~ new matrix connections to the protection capacity are

established in order to restore the failed working capacity, said Actuator function causing the

performing of the following actions on said protection capacity, in case of failure:

squelching partially the low priority traffic, present before the failure, and pre-empting

only ~~the~~ a part of the low priority traffic necessary for carrying said TDM and high priority data

traffic;

Bridge and Switch: comprising acting on the cross-connection matrix to restore the TDM

and high priority data traffic; and

balancing the access for the low priority data traffic to the remaining spare capacity by

said statistical multiplexing.

8.   (currently amended): ~~Method~~ The method according to claim 1, wherein said

network is a ring network subject to a MS/SPRING protection mechanism.

9.   (currently amended): ~~Network node~~ A network node for carrying out the method

of claim 1, wherein said network node comprises:

a first switching element to switch the TDM traffic over the TDM part of the working

channels, in the non-failure condition, or over the protection capacity in case of failure;

a second switching element for the data traffic, comprising circuits to perform the

following actions:

recognizing the class of service of the input data, wherein said input data comprises said

high or low priority data traffic; and

assigning the data traffic to ~~the~~ a correct output on said working or protection capacity in

both non-failure and failure conditions, so as in failure conditions all the high priority data traffic

is switched over the protection capacity, and the low priority data traffic is switched over the

protection capacity according to said function of statistical multiplexing.

10.   (currently amended): ~~Network~~ The network node according to claim 9, wherein

said second switching element comprises:

an input mapper module for the said recognizing of the class of service of the input data;

a load balancer module for the said assigning of the data traffic to the correct output in

both non-failure and failure conditions, said load balancer comprising circuits for:

dividing the high priority from the low priority data by mapping them in different Virtual

Containers (VCs) of the synchronous digital hierarchy frames;

applying the said function of statistical multiplexing for the low priority data traffic to

access the dedicated VCs; and

balancing the low priority data traffic in both non-failure and failure conditions, so as in

failure conditions said low priority data traffic is switched over the protection capacity according

to said function of statistical multiplexing.

11.   (currently amended): ~~Synchronous~~ A synchronous digital hierarchy network,

subject to a protection mechanism, with a data ~~(packet)~~ network deployed over ~~it~~the synchronous

digital hierarchy network, said network comprising means for performing the method of claim 1.

12.   (currently amended): ~~Synchronous~~ A synchronous digital hierarchy network,

subject to a ~~pro-tection~~protection mechanism, with a data ~~(packet)~~ network deployed over ~~it~~the

synchronous digital hierarchy network, said network comprising network nodes according to

claim 9.

13.   (new): A method for using the complete resource capacity of a synchronous

digital hierarchy network, said network comprising nodes bi-directionally transmitting time

division multiplex (TDM) and data traffic over a working capacity and a protection capacity,

wherein in case of a failure, said method comprising:

subjecting the TDM traffic to said protection mechanism, and shifting the TDM traffic

over to the protection capacity;

shifting data, having at least one of a first class of service from a working capacity and a

second class of service from a working capacity, to the protection capacity;

shifting data, having at least one of the second class of service from the working capacity

and a third class of service from the working capacity, to the protection capacity;

wherein the protection capacity is shared by the data having at least one of the first class

of service from the working capacity and the second class of service from the working capacity,

the data having at least one of the second class of service from the working capacity and the third

class of service from the working capacity, and data having the third class of service from the

protection capacity, wherein all of the protection capacity is used to carry data traffic.

14.   (new): The method according to claim 13, wherein said first class of service

comprises high priority data having a guaranteed bandwidth,

wherein said second class of service comprises medium priority data having guaranteed

bandwidth and non-guaranteed bandwidth, and

wherein said third class of service comprises best-effort data traffic having non-

guaranteed bandwidth.